

REMARKS

Claims 1, 2, 13, 15, 16, and 18 are amended, claim 14 is canceled, and claim 26 is added herein. Claims 1-13 and 15-26 are pending in the captioned case. Further examination and reconsideration of the presently claimed application are respectfully requested.

Interview Summary

Applicants thank Examiner Tecklu for the courtesies extended during the telephonic interview on November 16, 2009 in which Tabloski was discussed and contrasted with the current claims.

Section 102 Rejection

Claims 1-10, 12-14, and 16-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,999,729 to Tabloski, Jr. et al. (hereinafter “Tabloski”). The standard for “anticipation” is one of fairly strict identity. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art of reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP 2131. Furthermore, anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, as arranged in the claim. *W.L. Gore & Assocs. V. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). Using these standards, Applicant submits Tabloski fails to disclose each and every element of the currently pending claims, as set forth in more detail below.

Tabloski uses dataflow graphs (Tabloski -- Figs. 6, 7) to describe a parallel application, however Tablonski is a different type of system targeting a different problem than contemplated by the present invention. Tablonski targets a conventional parallel application where data is allocated or distributed to all the processors. There is no shared memory, the data is partitioned. Because Tablonski treats each “object” separately, there is minimal interprocess communication (Tabloski -- col. 20, line 30 – col. 24, line 36; Fig. 7). Tablonski uses a dataflow graph to

generate code in a high level language (C++) (Tabloski -- col. 20, lines 15-29). This C++ code is then compiled at runtime into an executable program.

While a preferred form of the present invention includes a “compiler” it operates in a different manner and attains a different result than Tabloski. As shown in present Fig. 2A, this “compiler tool” includes many design components, such as an assembler, loader, and synthesizer. In a preferred embodiment of the present invention, the compiler 12 includes a set of programmable tools for the development and maintenance of the components. The compiler 12 constructs a representation of the data flow graph where the composite operators are in-lined and the ports configured to validate and optimize the graph prior to execution. At execution, this graph representation is used to load and configure the map components, link the ports and to start each map component execution on a separate thread as part of a single process. The claims as amended reflect these different constructs for “compiler tools.” Such “compiler tools” have no counterpart in Tabloski.

Tabloski does not execute map processes on a separate thread. Instead, Tabloski executes objects concurrently as separate processes – not in a shared memory architecture. There are no composite components or composite maps or composite or hierarchical ports. Therefore, it is not surprising that in Tabloski, the execution objects communicate blockage to an execution control object (a processor).

In a preferred form of the present invention, applications are targeted at shared memory, multiprocessing (SMP) systems and executed on threads in a single process image. Data is transferred between operators using queues via the ports. Tabloski achieves parallelism by executing objects concurrently as separate processes (Tabloski -- col. 20, line 30 – col. 24, line 36; Fig. 7). Tabloski uses an execution control object on each node of the networked processing environment to communicate with the execution objects.

Turning to the claims, because Tabloski does not use threads to execute objects in the dataflow, it is not surprising that Tabloski fails to teach or disclose “assigning a separate thread to each map process” as described in claim 1. Indeed, Tabloski does not mention the notion of

“threads” or a multiple thread environment. See, e.g., present claim 16 (“allocating a separate thread to each of a plurality of map processes”) and present claim 18 (“assigning a separate thread to a separate map process . . .”). Support for the notion of assigning a separate thread to separate map processes can be found through out the present application, e.g., pg. 4, lines 1-19; pg. 8, lines 10-15, pg. 29, lines 16-22; pg. 30, lines 1-5.

Tabloski fails to teach or disclose the use of composite operators or composite ports. See, e.g., present claims 5, 7, 12, 26. As outlined above, Tabloski fails to disclose the “compiler tools” as described in present claim 1. These and other differences are apparent in the claims currently presented and Tabloski.

For at least the reasons stated above, Applicants assert independent claims 1, 16, and 18, as well as claims dependent therefrom, are not anticipated by Tabloski. Accordingly, removal of this rejection is respectfully requested.

Section 103 Rejection

Claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Tabloski in view of U.S. Patent No. 7,095,852 to Wack et al. (hereinafter “Wack”). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Tabloski in view of U.S. Patent No. 6,993,753 to Yamanaka (hereinafter “Yamanaka”). Claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Tabloski in view of U.S. Patent No. 7,124,405 to Kakivaya et al. (hereinafter “Kakivaya”).

For at least the same reasons discussed above regarding the patentability of independent claims 1 and 18, Applicants believe claims 11, 15, and 25 dependent therefrom are also patentable over Tabloski or the combinations of Tabloski and Wack, Yamanaka, or Kakivaya. Furthermore, because Tabloski presents a different solution and architecture in a distributed data parallel application, it is not seen how Tabloski can reasonably be applied. Tabloski would teach away and a predictable result would not be taught. *DePuy Spine v. Medtronic*, 567 F.3d 1314

(Fed. Cir. 2000). Accordingly, Tabloski does not appear to be applicable under § 103. Accordingly, removal of this rejection is respectfully requested.

CONCLUSION

The present amendment and response is believed to be a complete response to the issues raised in the Office Action mailed August 18, 2009. In view of the amendments and remarks herein, Applicants assert that pending claims 1-13 and 15-26 are in condition for allowance. If the Examiner has any questions, comments, or suggestions, the undersigned attorney earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Daffer McDaniel, LLP Deposit Account No. 50-3268.

Respectfully submitted,

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